



ROTARY TOOL SET

Model 97626

SET UP AND OPERATING INSTRUCTIONS



Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.
Failure to do so can result in serious injury.
SAVE THIS MANUAL.**

Copyright© 2008 by Harbor Freight Tools®. All rights reserved. No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

For technical questions or replacement parts, please call 1-800-444-3353.

Revised Manual 09k

SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

GENERAL SAFETY RULES



WARNING! Read all instructions

Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury. The term "power tool" in all of the warnings listed below refers to your line-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1. Work area safety

- a. Keep work area clean and well lit. *Cluttered or dark areas invite accidents.*
- b. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. *Power tools create sparks which may ignite the dust or fumes.*
- c. **Keep children and bystanders away while operating a power tool. *Distractions can cause you to lose control.***

2. Electrical safety

- a. Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools. *Unmodified plugs and matching*

outlets will reduce risk of electric shock.

- b. **Do not expose power tools to rain or wet conditions. *Water entering a power tool will increase the risk of electric shock.***
- c. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. *Damaged or entangled cords increase the risk of electric shock.***

3. Personal safety

- a. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. *A moment of inattention while operating power tools may result in serious personal injury.*
- b. **Use safety equipment. Always ANSI-approved wear eye protection. *Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.***
- c. Avoid accidental starting. Ensure the switch is in the off-position before plugging in. *Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.*
- d. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. *Loose clothes, jewelry or long hair can be caught in moving parts.*

4. Power tool use and care

- a. Do not force the power tool. Use the correct power tool for your application. *The correct power tool will do the job better and safer at the rate for which it was designed.*
- b. Do not use the power tool if the switch does not turn it on and off. *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
- c. **Disconnect the plug from the power source from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.**
- d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.**
- e. Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. *Many accidents are caused by poorly maintained power tools.*
- f. Keep cutting tools sharp and clean. *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g. Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. *Use of*

the power tool for operations different from those intended could result in a hazardous situation.

VIBRATION HAZARD

This tool vibrates during use.

Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice between different processes.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.

7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

SPECIFIC SAFETY RULES

1. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. Avoid unintentional starting. Prepare to begin work before turning on the tool.
3. Do not lay the tool down until it has come to a complete stop. Moving parts can grab the surface and pull the tool out of your control.
4. When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.
5. Do not leave the tool unattended when it is plugged into an electrical outlet. Turn off the tool, and unplug it from its electrical outlet before leaving.
6. Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.
7. This product is not a toy. Keep it out of reach of children.
8. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
 - Avoid operating alone.
 - Do not use with power switch locked on.
 - Properly maintain and inspect to avoid electrical shock.
 - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
9. Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead-based paints
 - Crystalline silica from bricks and cement or other masonry products
 - Arsenic and chromium from chemically treated lumberYour risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)
10. **WARNING:** The brass components of this product contain lead, a chemical known to the State of California to cause birth defects (or other reproductive harm). (California Health & Safety code § 25249.5, *et seq.*)
11. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



SAVE THESE INSTRUCTIONS.

GROUNDING



WARNING Improperly connecting the

grounding wire can result in electric shock.



Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Extension Cords

1. **Grounded** tools require a three wire extension cord. **Double Insulated** tools can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. (See Table A.)
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. (See Table A.)
4. When using more than one extension cord to make up the total length,

make sure each cord contains at least the minimum wire size required. (See Table A.)

5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. (See Table A.)
6. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120/240 VOLT)					
NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH				
	25'	50'	75'	100'	150'
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-

* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

TABLE A

Symbology

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
	Volts Alternating Current
	Amperes
n_0 xxxx/min.	No Load Revolutions per Minute (RPM)

SPECIFICATIONS

Electrical Requirements	120 V~ / 60 Hz
Rotation Speed	16,000 RPM
Collet Size	3/32", 1/32", and two 1/8"

UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

OPERATING INSTRUCTIONS



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Tool Set Up



TO PREVENT SERIOUS INJURY

FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the tool to its "OFF" position and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

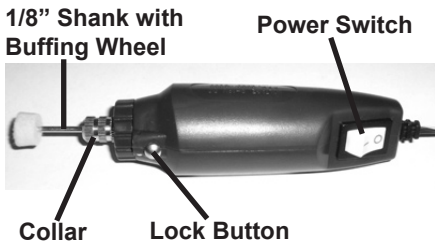
General Operating Instructions

1. Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent injury and distraction.
2. Secure loose workpieces using a vise or clamps (not included) to prevent movement while working.

3. There must not be hazardous objects, such as utility lines or foreign objects, nearby that will present a hazard while working.

Accessory Tips

- Mandrels are the shanks with a threaded or screw head. Use them with the cut-off wheels, polishing wheels, and sanding discs. The shank without threads on the end is for the felt polishing wheels.
 - The Mounted Stones are used for sharpening cutting tools, screwdrivers etc, deburring metal after cutting, and removing excess material on metal and ceramics.
 - The Sanding Drums can be used to smooth out rough areas on soft materials.
 - The Cut-off Wheels are used for cutting, carving and slotting materials.
 - The Buffing Wheels are used to polish materials.
 - The Wire Wheels are used to clean dirty or rusted surfaces.
 - The Whet Stone is used to sharpen the Drill Bits.
 - The Drill Bits can be used to bore small holes.
4. Hold the Lock Button down and unscrew the Collar.



5. Choose the right Shank for the job, insert it into the correct size Collet and place it into the Rotary Tool.
6. Place the Collar over the Shank and Collet, hold the Lock Button down, and screw the Collar until it is tight. Let go of the Lock Button. Pull on the Shank to ensure that it is secure.
7. Push the accessory to be used onto the end of the Shank.
8. Plug the Power Pack into a standard, grounded 120V electrical outlet.
9. Plug the Rotary Tool into the connection on the Power Pack.
10. Turn the Power Switch "ON" and allow the Rotary Tool to come up to full speed before beginning work.
11. Contact the material lightly. Do not press hard on the tool while working; allow the tool to work at its own pace. It is better to make several passes on material than to try to remove a lot of material in one pass.
12. To prevent accidents, turn off the tool and disconnect its power supply after use. Clean, then store the tool indoors out of children's reach.

USER-MAINTENANCE INSTRUCTIONS



Procedures not specifically explained in this manual must be performed only by a qualified technician.

WARNING TO PREVENT SERIOUS INJURY

**FROM ACCIDENTAL
OPERATION:**

Turn the Power Switch of the tool to its "OFF" position and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

**TO PREVENT SERIOUS
INJURY FROM TOOL
FAILURE:**

Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

Cleaning, Maintenance, and Lubrication

1. **BEFORE EACH USE**, inspect the general condition of the tool. Check for loose screws, misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
2. **AFTER USE**, clean external surfaces of the tool with clean, moist cloth.
3. **WARNING!** If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

PARTS LIST

Part	Description	Qty
1	Rotary Tool	1
2	Power Pack	1
3	Collet	4
4	Diamond Burr Bits (3/32" Shank)	20
5	Mounted Stone (3/32" Shank)	10
6	Sanding Drum (3/32" Shank)	2
7	Cut-off Wheel (1/8" Shank)	25
8	Buffing Wheel (1/8" Shank)	4
9	Wire Wheel (1/8" Shank)	2
10	Whet Stone	1
11	Drill Bit (1mm, 2.25mm, 3mm & 1/8")	4

1



2



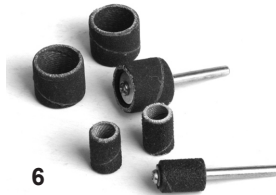
3



4



5



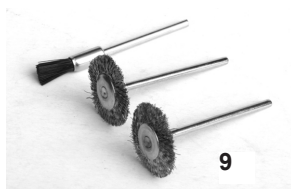
6



7



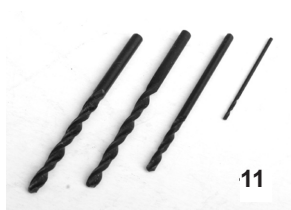
8



9



10



11

LIMITED 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

3491 Mission Oaks Blvd. • PO Box
6009 • Camarillo, CA 93011 • (800)
444-3353

Record Product's Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.